

Q. What is a “capture zone analysis”?

A. The phrase “capture zone analysis” is a term of art. It describes the analysis used to determine whether a portion of an aquifer proposed for exemption meets the criterion at 40 C.F.R. 146.4(a) – “it does not currently serve as a source of drinking water.” As described in the July 24, 2014 memo from Peter Grevatt to the Water Division Directors, “EPA has determined that water that currently serves as a source of drinking water includes water that is being withdrawn in the present moment as well as water that will be withdrawn in the future by wells that are currently in existence.”

The term “capture zone analysis” does not refer to a specific formula or a particular type of analysis, but rather whatever technical analysis is conducted to determine whether the exempted aquifer does not currently serve as a source of drinking water. The type of analysis may vary significantly depending on the particular facts and the desired level of certainty.

A capture zone analysis does not necessarily involve a determination of the life of the drinking water wells or a calculation based on groundwater flow rate and direction. Any technical analysis that supports finding that wells currently in existence do not and will not draw water from the exempted portion of the aquifer is a “capture zone analysis”.

Q. Is a capture zone analysis needed for every aquifer exemption request?

A. All aquifer exemptions must meet the criterion at 40 C.F.R. § 146.4(a). To be consistent with the interpretation of EPA’s regulation in the July 24, 2014 memo from Peter Grevatt to the Water Division Directors, a technical analysis (a/k/a “capture zone analysis”) would be needed to conclude that drinking water wells currently in existence do not and will not draw water from the exempted portion of the aquifer.

Q. How far out from the exemption boundary do I need to look in determining which wells to evaluate for the capture zone analysis?

A. There is no set distance (“buffer zone”) for EPA’s analysis, but EPA’s Guidance 34 recommends evaluating a minimum of a ¼ mile area around the exemption zone. The record of EPA’s decision, however, should identify the distance used and the technical basis for using that distance. The technical basis could be part of the capture zone analysis (CZA). For example, if the CZA is based on an examination of drinking water wells in a one mile area around the exemption, and the technical basis for finding that they will not draw water from the exempted portion of the aquifer also applies to any well further away, that would be the technical basis for EPA’s decision to look only at wells in a one mile area around the exemption.